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CORRESPONDENCE

Maggot Infested Birds.

EDITOR OF 'THE AUK':

Since beginning the operating of my hospital for the care and treatment of injured wild birds, some three or four years ago, my attention has frequently been called to the number of birds suffering from the presence of maggots in some of the external parts of the body. The number of avian sufferers has increased so greatly this season over previous years, and there seems to be so little known about the fly producing these worms, that I feel impelled to present my observations to the readers of 'The Auk' in the hopes that a complete history of the fly may be furnished by some one.

The victims seem to be confined almost exclusively to the smaller birds, Yellow Warblers, Goldfinches, House Finches, Horned Larks, Vireos, and the House Sparrows in particular, and are fledglings, scarcely an adult coming to the hospital. A few Western Meadowlarks have been brought to me, two specimens — fledglings — yielding one hundred worms, their bodies presenting the appearance of having been struck by a load of shot. The largest number of these worm-infested creatures come from the homes of the House Sparrow. A friend reported that a litter of infant pigs were invaded by the fly and three of them died from the presence of the maggots burrowing into the brain through the eyes. It is reported also that a bird-devouring cat fell victim to the worms.

The favorite location selected by the fly to deposit its eggs and young, — for the young evidently hatches in the act of deposit in the soft tissues of the bird and immediately burrows beneath the surface, — is on the head, near or in the corner of the eyes, about the neck and upper part of the wings,

but the legs have been the only parts not invaded so far as my observation goes. The maggot eats a burrow or chimney into the flesh of its victim, remaining stationary and feeding upon the fluids of the helpless messmate until death releases it, when the horrid thing deserts the lifeless carcass and if not destroyed buries itself in the earth. Very little seems to be known about this strange fly, so far as my inquiries have extended, but the old-timers call it the "screw fly," and regard it with great disfavor.

A number of years ago a lady brought her six-month-old infant to me for examination and relief, stating that whilst wheeling her baby through the park it suddenly cried out as though in pain, and she discovered one of these screw flies dashing about over the child's face. An investigation revealed some six or eight microscopic larvæ busily burrowing into the tender skin of the helpless victim. And this was within half an hour after the attack of the fly.

In order to get some reliable data in regard to the genesis of this maggot, I secured a number of them and bedded them in earth, confining the receptacle in which they were to pass through their mysterious transformation in a box covered with close-woven wire netting which effectually prohibited the escape of the fly.

Within a few days' time the larvæ were transformed into the chrysalis state, and in about three weeks two flies appeared, smaller than the ordinary green fly but resembling it in every way. These flies died before I could carry out further experiments, but other hatchings I trust will give me the desired opportunity of watching them sting a live bird.

! Dr. J. Bequaert of the American Museum of Natural History, to whom the dead flies were submitted, reports as follows:

"The flies obtained by Dr. Arnold from bird-infesting maggots belong to the genus *Protocalliphora* of the Calliphorinae or bluebottle flies. In Europe and North America the larvæ of two very closely allied species of *Protocalliphora* are known to parasitize birds. The species reared by Dr. Arnold from skin-boring maggots I consider to be the true *Protocalliphora azurea* (Fallen). In the Eastern United States (Pennsylvania, New York) and also in Europe there is an apparently different species, *Protocalliphora sordida* (Zetterstedt), whose maggots live among the feathers of young or even adult birds, sucking blood at intervals without boring into the skin. The life history and distribution of these two bird parasites are not yet completely known, and I should be very grateful for further information on the subject, especially if accompanied by maggots or flies."

Fewer maggot infested birds were brought to the hospital the past summer than during the previous few years.

Careful experiments proved positively that the fly would not deposit its eggs or larvæ in the dead carcasses of birds.

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